

SEQLIST.TXT

SEQUENCE LISTING

<110> Baumgarten, Birgit
 Jones, Carol Elizabeth
 Ludwig, Marie-Gabrielle
 Martiny-Baron, Georg
 Seuwen, Klaus
 Wolf, Romain
 Wyder, Lorenza
 Suply, Thomas

<120> PROTON-SENSING G-PROTEIN COUPLED
 RECEPTORS AND DNA SEQUENCES THEREOF

<130> DC-4-33201A

<140> US 10/560,322

<141> 2004-06-18

<150> PCT/EP2004/006625

<151> 2004-06-18

<150> 60/499,549

<151> 2003-09-02

<150> 60.480,245

<151> 2003-06-20

<160> 6

<170> FastSEQ for Windows Version 4.0

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<211> 365

<212> PRT

<213> H. sapiens

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His Ile Thr His Gln Thr Leu Ala Pro Val Val Tyr Val Thr Val Leu
 20          25          30
Val Val Gly Phe Pro Ala Asn Cys Leu Ser Leu Tyr Phe Gly Tyr Leu
 35          40          45
Gln Ile Lys Ala Arg Asn Glu Leu Gly Val Tyr Leu Cys Asn Leu Thr
 50          55          60
Val Ala Asp Leu Phe Tyr Ile Cys Ser Leu Pro Phe Trp Leu Gln Tyr
 65          70          75          80
Val Leu Gln His Asp Asn Trp Ser His Gly Asp Leu Ser Cys Gln Val
 85          90          95
Cys Gly Ile Leu Leu Tyr Glu Asn Ile Tyr Ile Ser Val Gly Phe Leu
100          105          110
Cys Cys Ile Ser Val Asp Arg Tyr Leu Ala Val Ala His Pro Phe Arg
115          120          125
Phe His Gln Phe Arg Thr Leu Lys Ala Ala Val Gly Val Ser Val Val
130          135          140
Ile Trp Ala Lys Glu Leu Leu Thr Ser Ile Tyr Phe Leu Met His Glu
145          150          155          160
Glu Val Ile Glu Asp Glu Asn Gln His Arg Val Cys Phe Glu His Tyr
165          170          175
Pro Ile Gln Ala Trp Gln Arg Ala Ile Asn Tyr Tyr Arg Phe Leu Val

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Gly	Phe	Leu	180	Pro	Ile	Cys	Leu	185	Leu	Ala	Ser	Tyr	190	Gln	Gly	Ile
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	210					215					220					
Gln	Ile	Gln	Arg	Leu	Val	Leu	Ser	Thr	Val	Val	Ile	Phe	Leu	Ala	Cys	
225					230					235					240	
Phe	Leu	Pro	Tyr	His	Val	Leu	Leu	Leu	Val	Arg	Ser	Val	Trp	Glu	Ala	
				245					250					255		
Ser	Cys	Asp	Phe	Ala	Lys	Gly	Val	Phe	Asn	Ala	Tyr	His	Phe	Ser	Leu	
			260					265					270			
Leu	Leu	Thr	Ser	Phe	Asn	Cys	Val	Ala	Asp	Pro	Val	Leu	Tyr	Cys	Phe	
		275					280					285				
Val	Ser	Glu	Thr	Thr	His	Arg	Asp	Leu	Ala	Arg	Leu	Arg	Gly	Ala	Cys	
	290					295					300					
Leu	Ala	Phe	Leu	Thr	Cys	Ser	Arg	Thr	Gly	Arg	Ala	Arg	Glu	Ala	Tyr	
305					310					315					320	
Pro	Leu	Gly	Ala	Pro	Glu	Ala	Ser	Gly	Lys	Ser	Gly	Ala	Gln	Gly	Glu	
				325					330					335		
Glu	Pro	Glu	Leu	Leu	Thr	Lys	Leu	His	Pro	Ala	Phe	Gln	Thr	Pro	Asn	
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<210> 2
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Peptide used for antibody production

<400> 2
 Cys Phe Val Ser Glu Thr Thr His Arg Asp Leu Ala Arg Leu Arg Gly
 1 5 10 15

<210> 3
 <211> 362
 <212> PRT
 <213> H. sapiens

<400> 3
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 His Leu His Pro Pro Ser Leu Tyr Ile Phe Val Ile Gly Val Gly Leu
 20 25 30
 Pro Thr Asn Cys Leu Ala Leu Trp Ala Ala Tyr Arg Gln Val Gln Gln
 35 40 45
 Arg Asn Gln Leu Gly Val Tyr Leu Met Asn Leu Ser Ile Ala Asp Leu
 50 55 60
 Leu Tyr Ile Cys Thr Leu Pro Leu Trp Val Asp Tyr Phe Leu His His
 65 70 75 80
 Asp Asn Trp Ile His Gly Pro Gly Ser Cys Lys Leu Pro Gly Phe Ile
 85 90 95
 Phe Tyr Thr Asn Ile Tyr Ile Ser Ile Ala Phe Leu Cys Cys Ile Ser
 100 105 110
 Val Asp Arg Tyr Leu Ala Val Ala His Pro Leu Arg Phe Ala Arg Leu
 115 120 125
 Arg Arg Val Lys Thr Ala Val Ala Val Ser Ser Val Val Trp Ala Thr
 130 135 140
 Glu Leu Gly Ala Asn Ser Ala Pro Leu Phe His Asp Glu Leu Phe Arg

SEQLIST.TXT

145					150					155					160
Asp	Arg	Tyr	Asn	His 165	Thr	Phe	Cys	Phe	Glu 170	Lys	Phe	Pro	Met	Glu 175	Gly
Trp	Val	Ala	Trp 180	Met	Asn	Leu	Tyr	Arg 185	Val	Phe	Val	Gly	Phe 190	Leu	Phe
Pro	Trp	Ala 195	Leu	Met	Leu	Leu	Ser 200	Tyr	Arg	Gly	Ile	Leu 205	Arg	Ala	Val
Arg	Gly 210	Ser	Val	Ser	Thr	Glu 215	Arg	Gln	Glu	Lys	Ala 220	Lys	Ile	Lys	Arg
Leu 225	Ala	Leu	Ser	Leu	Ile 230	Ala	Ile	Val	Leu	Val 235	Cys	Phe	Ala	Pro	Tyr 240
His	Val	Leu	Leu	Leu 245	Ser	Arg	Ser	Ala	Ile 250	Tyr	Leu	Gly	Arg	Pro 255	Trp
Asp	Cys	Gly	Phe 260	Glu	Glu	Arg	Val	Phe 265	Ser	Ala	Tyr	His	Ser 270	Ser	Leu
Ala	Phe	Thr 275	Ser	Leu	Asn	Cys	Val 280	Ala	Asp	Pro	Ile	Leu 285	Tyr	Cys	Leu
Val	Asn 290	Glu	Gly	Ala	Arg	Ser 295	Asp	Val	Ala	Lys	Ala 300	Leu	His	Asn	Leu
Leu 305	Arg	Phe	Leu	Ala	Ser 310	Asp	Lys	Pro	Gln	Glu 315	Met	Ala	Asn	Ala	Ser 320
Leu	Thr	Leu	Glu	Thr 325	Pro	Leu	Thr	Ser	Lys 330	Arg	Asn	Ser	Thr	Ala 335	Lys
Ala	Met	Thr	Gly 340	Ser	Trp	Ala	Ala	Thr 345	Pro	Pro	Ser	Glu	Gly 350	Asp	Gln
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<213> H. sapiens
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			20					25					30			
Ile	Gly	Ser	Leu	Cys	Val	Ser	Phe	Leu	Gln	Pro	Lys	Lys	Glu	Ser	Glu	
		35					40					45				
Leu	Gly	Ile	Tyr	Leu	Phe	Ser	Leu	Ser	Leu	Ser	Asp	Leu	Leu	Tyr	Ala	
	50					55					60					
Leu	Thr	Leu	Pro	Leu	Trp	Ile	Asp	Tyr	Thr	Trp	Asn	Lys	Asp	Asn	Thr	
65					70					75					80	
Thr	Phe	Ser	Pro	Ala	Leu	Cys	Lys	Gly	Ser	Ala	Phe	Leu	Met	Tyr	Met	
				85					90					95		
Leu	Phe	Tyr	Ser	Ser	Thr	Ala	Phe	Leu	Thr	Cys	Ile	Ala	Val	Asp	Arg	
			100					105					110			
Tyr	Leu	Ala	Val	Val	Tyr	Pro	Leu	Lys	Phe	Phe	Phe	Leu	Arg	Thr	Arg	
		115					120					125				
Arg	Ile	Ala	Leu	Met	Val	Ser	Leu	Ser	Ile	Trp	Ile	Leu	Glu	Thr	Ile	
	130					135					140					
Phe	Asn	Ala	Val	Met	Leu	Trp	Glu	Asp	Glu	Thr	Val	Val	Glu	Tyr	Cys	
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Asp	Ala	Glu	Lys	Ser	Asn	Phe	Thr	Leu	Cys	Tyr	Asp	Lys	Tyr	Pro	Leu	
				165					170					175		
Glu	Lys	Trp	Glu	Ile	Asn	Leu	Asn	Leu	Phe	Arg	Thr	Cys	Thr	Gly	Tyr	
			180					185					190			
Ala	Ile	Pro	Leu	Val	Thr	Ile	Leu	Ile	Cys	Asn	Arg	Lys	Val	Tyr	Gln	
		195					200					205				
Ala	Val	Arg	His	Asn	Lys	Ala	Thr	Glu	Asn	Lys	Glu	Lys	Lys	Arg	Ile	
	210					215					220					

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Ile	Lys	Leu	Leu	Val	Ser	Ile	Thr	Val	Thr	Phe	Val	Leu	Cys	Phe	Thr
225					230					235					240
Pro	Phe	His	Val	Met	Leu	Leu	Ile	Arg	Cys	Ile	Leu	Glu	His	Ala	Val
				245					250					255	
Asn	Phe	Glu	Asp	His	Ser	Asn	Ser	Gly	Lys	Arg	Thr	Tyr	Thr	Met	Tyr
			260					265					270		
Arg	Ile	Thr	Val	Ala	Leu	Thr	Ser	Leu	Asn	Cys	Val	Ala	Asp	Pro	Ile
		275					280					285			
Leu	Tyr	Cys	Phe	Val	Thr	Glu	Thr	Gly	Arg	Tyr	Asp	Met	Trp	Asn	Ile
	290					295					300				
Leu	Lys	Phe	Cys	Thr	Gly	Arg	Cys	Asn	Thr	Ser	Gln	Arg	Gln	Arg	Lys
305					310					315					320
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				325					330					335	
Glu															

<210> 5
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 <212> PRT
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<220>
 <223> Peptide used for antibody production

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 Arg Ser Asp Val Ala Lys Ala Leu His Asn Leu Leu Arg Phe Leu Ala
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 Asp Glu Leu Phe Arg Asp Arg Tyr Asn His Thr Phe Cys Phe Glu Lys
 1 5 10 15
 Phe Pro Met Glu
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SEQLIST.TXT

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<213> H. sapiens

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Met Gly Asn Ile Thr Ala Asp Asn Ser Ser Met Ser Cys Thr Ile Asp
 1           5           10           15
His Ile Thr His Gln Thr Leu Ala Pro Val Val Tyr Val Thr Val Leu
 20           25           30
Val Val Gly Phe Pro Ala Asn Cys Leu Ser Leu Tyr Phe Gly Tyr Leu
 35           40           45
Gln Ile Lys Ala Arg Asn Glu Leu Gly Val Tyr Leu Cys Asn Leu Thr
 50           55           60
Val Ala Asp Leu Phe Tyr Ile Cys Ser Leu Pro Phe Trp Leu Gln Tyr
 65           70           75           80
Val Leu Gln His Asp Asn Trp Ser His Gly Asp Leu Ser Cys Gln Val
 85           90           95
Cys Gly Ile Leu Leu Tyr Glu Asn Ile Tyr Ile Ser Val Gly Phe Leu
100           105           110
Cys Cys Ile Ser Val Asp Arg Tyr Leu Ala Val Ala His Pro Phe Arg
115           120           125
Phe His Gln Phe Arg Thr Leu Lys Ala Ala Val Gly Val Ser Val Val
130           135           140
Ile Trp Ala Lys Glu Leu Leu Thr Ser Ile Tyr Phe Leu Met His Glu
145           150           155           160
Glu Val Ile Glu Asp Glu Asn Gln His Arg Val Cys Phe Glu His Tyr
165           170           175
Pro Ile Gln Ala Trp Gln Arg Ala Ile Asn Tyr Tyr Arg Phe Leu Val

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 210 215 220
 Gln Ile Gln Arg Leu Val Leu Ser Thr Val Val Ile Phe Leu Ala Cys
 225 230 235 240
 Phe Leu Pro Tyr His Val Leu Leu Leu Val Arg Ser Val Trp Glu Ala
 245 250 255
 Ser Cys Asp Phe Ala Lys Gly Val Phe Asn Ala Tyr His Phe Ser Leu
 260 265 270
 Leu Leu Thr Ser Phe Asn Cys Val Ala Asp Pro Val Leu Tyr Cys Phe
 275 280 285
 Val Ser Glu Thr Thr His Arg Asp Leu Ala Arg Leu Arg Gly Ala Cys
 290 295 300
 Leu Ala Phe Leu Thr Cys Ser Arg Thr Gly Arg Ala Arg Glu Ala Tyr
 305 310 315 320
 Pro Leu Gly Ala Pro Glu Ala Ser Gly Lys Ser Gly Ala Gln Gly Glu
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 Cys Phe Val Ser Glu Thr Thr His Arg Asp Leu Ala Arg Leu Arg Gly
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 Pro Thr Asn Cys Leu Ala Leu Trp Ala Ala Tyr Arg Gln Val Gln Gln
 35 40 45
 Arg Asn Gln Leu Gly Val Tyr Leu Met Asn Leu Ser Ile Ala Asp Leu
 50 55 60
 Leu Tyr Ile Cys Thr Leu Pro Leu Trp Val Asp Tyr Phe Leu His His
 65 70 75 80
 Asp Asn Trp Ile His Gly Pro Gly Ser Cys Lys Leu Pro Gly Phe Ile
 85 90 95
 Phe Tyr Thr Asn Ile Tyr Ile Ser Ile Ala Phe Leu Cys Cys Ile Ser
 100 105 110
 Val Asp Arg Tyr Leu Ala Val Ala His Pro Leu Arg Phe Ala Arg Leu
 115 120 125
 Arg Arg Val Lys Thr Ala Val Ala Val Ser Ser Val Val Trp Ala Thr
 130 135 140
 Glu Leu Gly Ala Asn Ser Ala Pro Leu Phe His Asp Glu Leu Phe Arg

SEQLIST.TXT

145	Asp	Arg	Tyr	Asn	His	150	Thr	Phe	Cys	Phe	Glu	155	Lys	Phe	Pro	Met	Glu	160	Gly
				165	Met	Asn	Leu	Tyr	Arg	Val	170	Phe	Val	Gly	Phe	Leu	Phe		
Trp	Val	Ala	Trp	180	Met	Leu	Leu	Ser	Tyr	Arg	Gly	Ile	Leu	Arg	Ala	Val			
Pro	Trp	Ala	195	Ser	Thr	Glu	Arg	Gln	Glu	Lys	Ala	Lys	Ile	Lys	Arg				
Arg	Gly	210	Val	215	Ile	Ala	Ile	Val	Leu	Val	Cys	Phe	Ala	Pro	Tyr				
Leu	Ala	225	Leu	230	Ser	Arg	Ser	Ala	Ile	Tyr	Leu	Gly	Arg	Pro	Trp				
His	Val	245	Leu	250	Glu	Arg	Val	Phe	Ser	Ala	Tyr	His	Ser	255	Leu				
Asp	Cys	Gly	260	Glu	Arg	Val	Phe	265	Ser	Ala	Tyr	His	Ser	270	Ser	Leu			
Ala	Phe	Thr	275	Ser	Leu	Asn	Cys	Val	Ala	Asp	Pro	Ile	Leu	Tyr	Cys	Leu			
Val	Asn	Glu	290	Gly	Ala	Arg	Ser	Asp	Val	Ala	Lys	Ala	Leu	His	Asn	Leu			
Leu	Arg	Phe	305	Leu	Ala	Ser	Asp	Lys	Pro	Gln	Glu	Met	Ala	Asn	Ala	Ser			
Leu	Thr	Leu	325	Glu	Thr	Pro	Leu	Thr	Ser	Lys	Arg	Asn	Ser	Thr	Ala	Lys			
Ala	Met	Thr	340	Gly	Ser	Trp	Ala	Ala	Thr	Pro	Pro	Ser	Glu	Gly	Asp	Gln			
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<210> 4
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 <213> H. sapiens

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			20	Tyr	25	Ile	Phe	Val	25	Ile	Val	Ser	Ile	30	Ala	Asn			
Ile	Gly	Ser	Leu	Cys	Val	Ser	Phe	Leu	Gln	Pro	Lys	Lys	Glu	Ser	Glu				
		35			40														
Leu	Gly	Ile	Tyr	Leu	Phe	Ser	Leu	Ser	Leu	Ser	Asp	Leu	Leu	Tyr	Ala				
		50			55														
Leu	Thr	Leu	Pro	Leu	Trp	Ile	Asp	Tyr	Thr	Trp	Asn	Lys	Asp	Asn	Thr				
		65			70														
Thr	Phe	Ser	Pro	Ala	Leu	Cys	Lys	Gly	Ser	Ala	Phe	Leu	Met	Tyr	Met				
			85																
Leu	Phe	Tyr	Ser	Ser	Thr	Ala	Phe	Leu	Thr	Cys	Ile	Ala	Val	Asp	Arg				
			100																
Tyr	Leu	Ala	Val	Val	Tyr	Pro	Leu	Lys	Phe	Phe	Phe	Leu	Arg	Thr	Arg				
		115																	
Arg	Ile	Ala	Leu	Met	Val	Ser	Leu	Ser	Ile	Trp	Ile	Leu	Glu	Thr	Ile				
		130																	
Phe	Asn	Ala	Val	Met	Leu	Trp	Glu	Asp	Glu	Thr	Val	Val	Glu	Tyr	Cys				
		145																	
Asp	Ala	Glu	Lys	Ser	Asn	Phe	Thr	Leu	Cys	Tyr	Asp	Lys	Tyr	Pro	Leu				
			165																
Glu	Lys	Trp	Glu	Ile	Asn	Leu	Asn	Leu	Phe	Arg	Thr	Cys	Thr	Gly	Tyr				
		180																	
Ala	Ile	Pro	Leu	Val	Thr	Ile	Leu	Ile	Cys	Asn	Arg	Lys	Val	Tyr	Gln				
		195																	
Ala	Val	Arg	His	Asn	Lys	Ala	Thr	Glu	Asn	Lys	Glu	Lys	Lys	Arg	Ile				
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SEQLIST.TXT

Ile Lys Leu Leu Val Ser Ile Thr Val Thr Phe Val Leu Cys Phe Thr
 225 230 235 240
 Pro Phe His Val Met Leu Leu Ile Arg Cys Ile Leu Glu His Ala Val
 245 250 255
 Asn Phe Glu Asp His Ser Asn Ser Gly Lys Arg Thr Tyr Thr Met Tyr
 260 265 270
 Arg Ile Thr Val Ala Leu Thr Ser Leu Asn Cys Val Ala Asp Pro Ile
 275 280 285
 Leu Tyr Cys Phe Val Thr Glu Thr Gly Arg Tyr Asp Met Trp Asn Ile
 290 295 300
 Leu Lys Phe Cys Thr Gly Arg Cys Asn Thr Ser Gln Arg Gln Arg Lys
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 Arg Ile Leu Ser Val Ser Thr Lys Asp Thr Met Glu Leu Glu Val Leu
 325 330 335
 Glu

<210> 5
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 <223> Peptide used for antibody production

<400> 5
 Arg Ser Asp Val Ala Lys Ala Leu His Asn Leu Leu Arg Phe Leu Ala
 1 5 10 15
 Ser Asp Lys

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 Asp Glu Leu Phe Arg Asp Arg Tyr Asn His Thr Phe Cys Phe Glu Lys
 1 5 10 15
 Phe Pro Met Glu
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